



# Air Force Research Laboratory

## Mesa Research Site

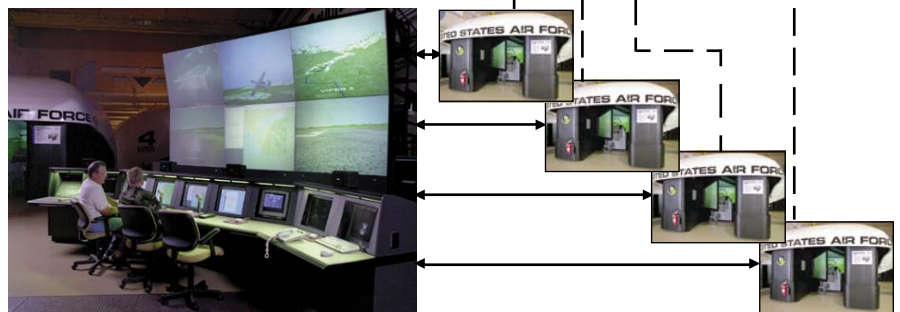


## Distributed Mission Training Technology and Methods

In the past, warfighter training depended heavily on the weapon systems as the only realistic media for providing mission training. Aircraft training devices were predominantly used to prepare aircrews to more effectively use limited flying hours. Their main purpose was to provide procedural training (e.g., emergency procedures, instrument approaches, and intercepts) aimed at improving aircrews' skills. Increased complexity of the weapons systems, increased training requirements, and expanding peacetime military operations other than war have significantly reduced the quality and quantity of realistic, available training opportunities in the aircraft for warfighters. Now, with dramatic improvements in the capability and affordability of advanced distributed simulation technologies, warfighter training can be significantly improved at the mission and team level using the Distributed Mission Training (DMT) concept.

DMT is, simply stated, a shared training environment comprised of live, virtual, and constructive simulations allowing warfighters to train individually or collectively at all levels of war. DMT allows multiple players at multiple sites to engage in training scenarios ranging from individual and team participation to full theater-level battles.

Low-cost, high fidelity, unit-level simulators with full visual systems immerse the warfighter in the "synthetic battlespace" training arena, enabling training throughout the full spectrum of operations. Available at the unit level networked locally and long-haul to other mission level nodes, units will be able to team with other air, ground, sea, and space forces to execute the Air Tasking Order (ATO) in various training scenarios. At other times, units will conduct local training or prepare for major exercises using the DMT system. DMT will also enhance brief, debrief, data collection, and mission replay and analysis to enable effective mission plan-



*AFRL/HEA's Distributed Mission Training Testbed for the Synthetic Battlespace*

ning and targeting. Furthermore, it will provide combat assessment and improve future combat mission execution thereby dramatically increasing the probability of first mission success.

Implementing the DMT concept will require changing how we think about training. "Training the way we intend to fight" requires recognizing that training is the peacetime manifestation of war. Future training systems must represent the total integrated mission, not just provide a reasonable emulation of the aircraft in a stand-alone configuration. This expanded training environment must support significantly enhanced

training opportunities for all warfighters. AFRL/HEA is supporting the development, demonstration, evaluation, and transition of the enabling technologies and methods needed for effective, affordable Distributed Mission Training for the warfighter.

Air Force Research Laboratory  
Warfighter Training Research Division  
6030 S. Kent St., Bldg. 561  
Mesa, Arizona 85212-6061  
(480) 988-6561  
<https://www.williams.af.mil>